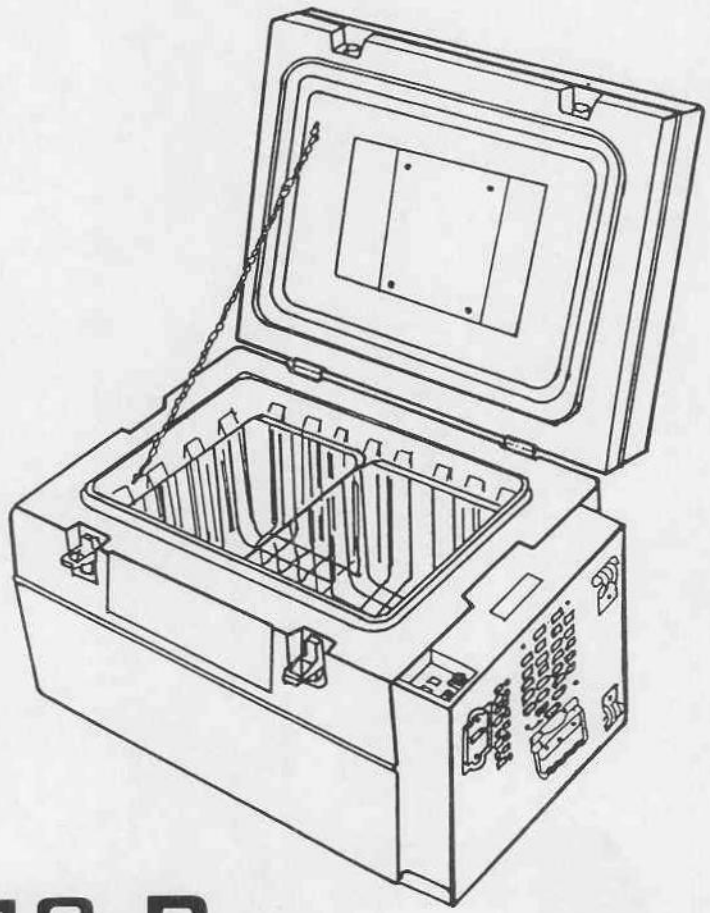
Reportable

THERMOSTABILIZER

FOR BLOOD



RCB42 P

SERVICE MANUAL

SERVICE MANUAL RCB 42 P

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A) MAINTENANCE

NOTE: We advise that only trained personnel carry out all maintenance and service work with the exception of external cleaning.
All items according to spare parts list.

ATTENTION: Before working on the box disconnect it from mains power supply.

The service intervals vary according to use and operating conditions.

The following maintenance works should however be made regularly

1. CLEANING

Clean the box inside and outside, just as the transport baskets with a mild disinfectant. Clean switches, connectors and cables only with a damp cloth.

If used in dusty conditions, unscrew cover (49), clean with soft brush and vacuum cleaner.

2. CHECK UP OF SCREW CONNECTIONS

a. Unscrew the cover (49), disconnect the lid mains-adapter casing (36) from the power supply and check that transformer nut is tight (37). Check all other accessible screws for tightness and then replace the cover.

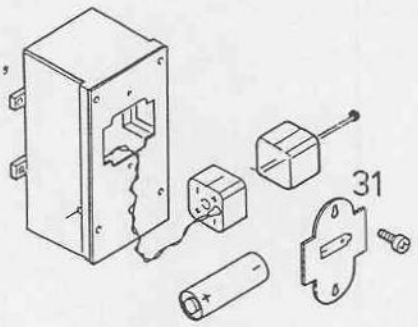
b. Check catches, hinges, grips and chain for tightness.

c. Check the 4 fitting screws of the thermoelectric module (1), inside the box, for tightness.

d. Oil hinges (8), grips (9) and catches (10) with thin oil (gun oil).

3. ACCU

When the box is connected to A.C. or D.C. power supply and one or more of the LED's are flashing in a faster sequence as usual, this is the sign of an accu-break.



Loosen the two screws securing lid (31) for accu compartment. Remove battery holder and check the connections. If there is no fault unscrew slotted screw of battery holder and open it. Remove the 4 batteries and check visually. In case of electrolyte leakage replace battery holder complete with batteries by new one, otherwise fit 4 new re-chargeable AA-batteries only; capacity 500 mAh.

Do not use any regular (non-rechargeable) dry cells!

Take care for right polarity; see indication on battery holder.

Re-install battery holder in reverse order.

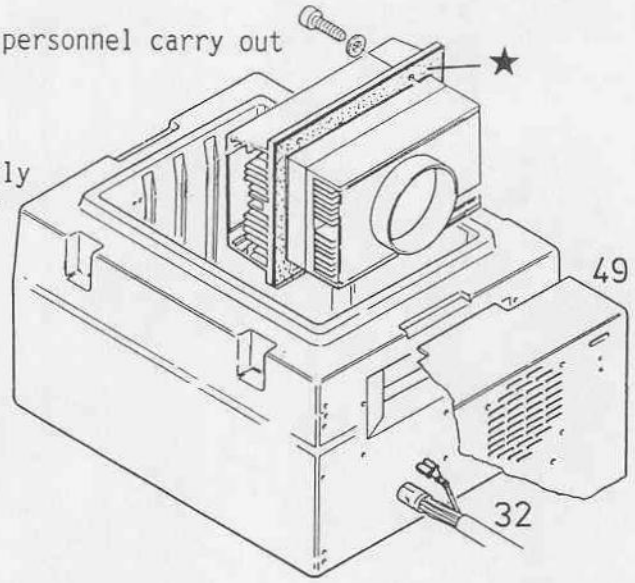
B) COMPONENT REPLACEMENT

NOTE: We advise that only trained personnel carry out all component replacement.

1. THERMOELECTRIC MODULE

Unscrew the cover (49) and carefully pull out the adapter-plug from the module (32).
Remove the 4 screws at the top and bottom edge of the module.
When installing the new module pay attention to an undamaged gasket (*).

Re- install the connection cable in a correct way.



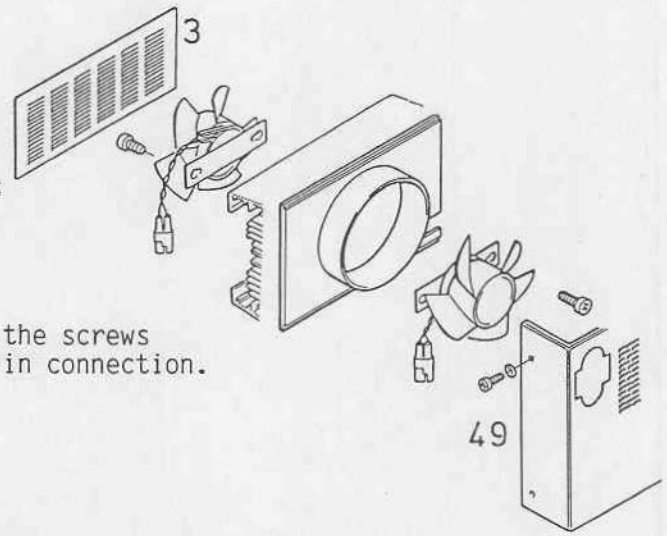
2. FANS

a. Inside fan

Remove the covering grid (3). Loosen the screws of the fan as well as the plug-in connection.

b. Outside fan

Unscrew the cover (49). Loosen the screws of the fan as well as the plug-in connection.

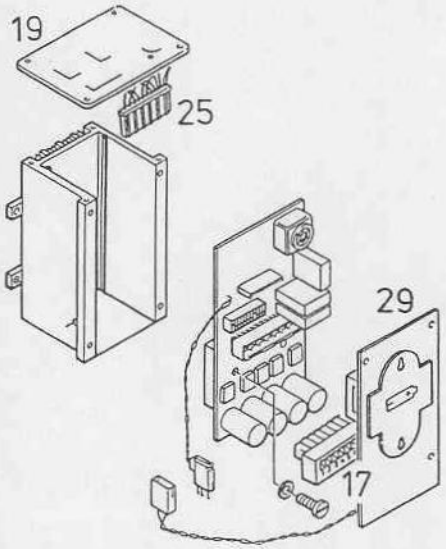


3. CIRCUIT BOARD

Unscrew lid (29) and (19) from electronic casing (15), disconnect the plug-in connection of the NC-accu. Pull out the plug-in connections (17) and (25). Loosen the screws of the board and pull it out in the upwards direction.

Refit a new board into the guidance and fix the screws.

It is important that the heat sink is well fitted to the rear wall of the electronic casing, otherwise damage due to overheating could occur to the electronic circuit.

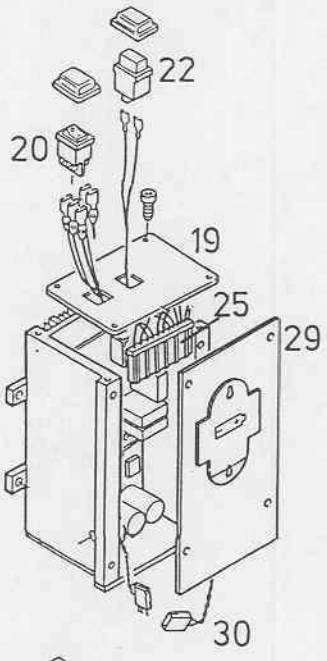


4. SWITCHES

Unscrew the lid (29) and (19). Unscrew the battery lead (3o) and the plug-in connection (25).

Push in the positioning cam of the switch (2o) or of the alarm reset push button (22) and pull out the plug from the top.

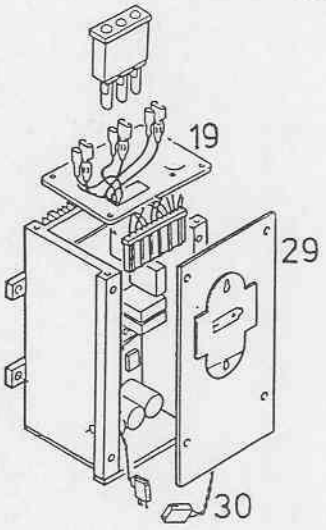
IMPORTANT: Remove connectors one by one from the old switch and refit them directly on the new switch.



5. LED's

Unscrew the lid (29) and (19). Disconnect the battery lead (3o) and the plug-in connection (25). Push in the positioning cam of the LED (2o) and pull out the LED from the top.

IMPORTANT : Remove connectors one by one from the old LED and refit them directly on the new switch.

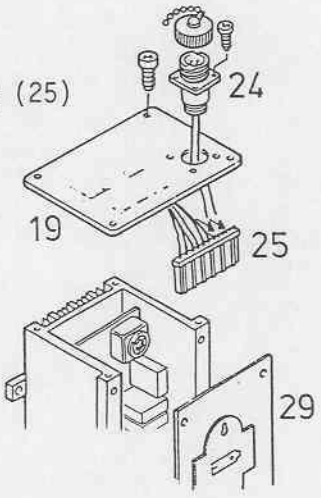


6. RECEPTACLES

6.1. Receptacle (24)

Unscrew the lid (29) and (19). Remove the plug (25) from the circuit board. Loosen the attachment screws of the cable from the receptacle (24) with the help of a small screw driver.

Unscrew the receptacle, place a new one and refit in reverse order.

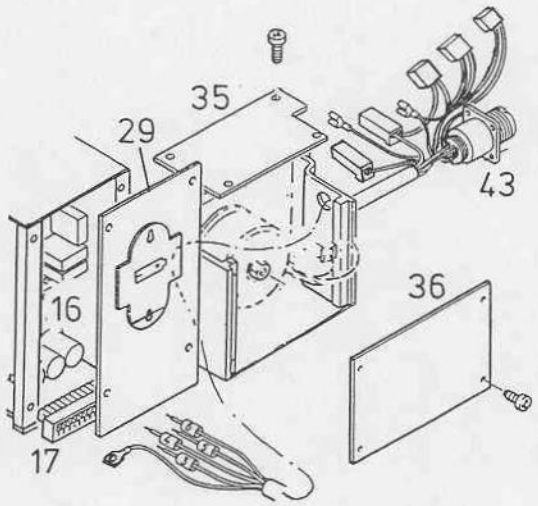


6.2. Receptacle (43)

Remove lid (29), (35) and (36).

Pull off the plug (17) from the circuit board (16). Loosen the connections 3 to 6 as well as the earth and unscrew the receptacle (43) from the casing for power supply.

Re-install in reverse order

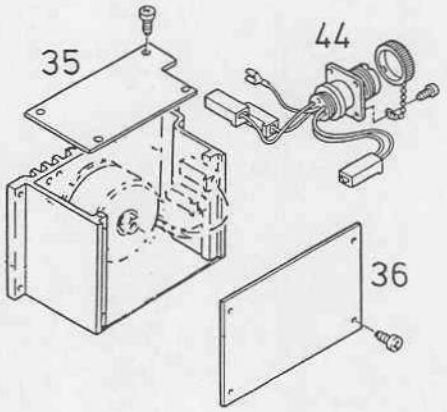


6.3. Receptacle (44)

Remove lid (36) and (35).

Loosen the connections and unscrew the receptacle (44) from the casing for power supply.

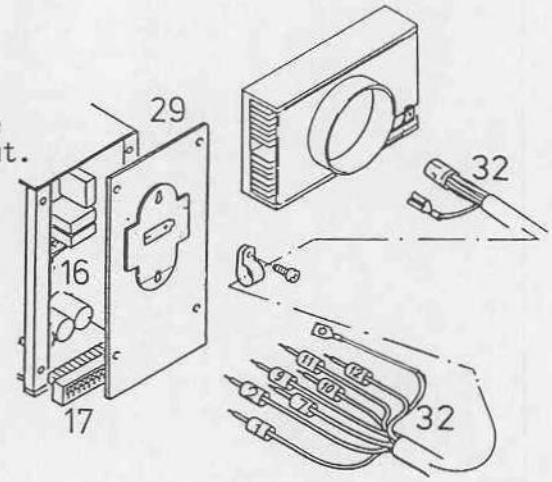
Re-install in reverse order.



6.4. Connection cable (32)

Loosen the plug-in connection of the thermoelectric module and pull it out.
Remove the lid (29) as well as the accu-holder.
Remove the plug (17) from the circuit board (16).
Loosen the different leads

Re-install in reverse order.

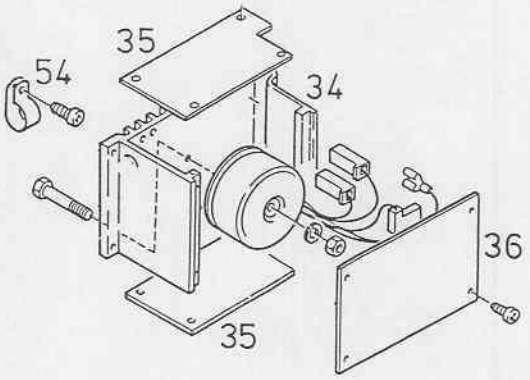


7. TRANSFORMER

Remove clip (54). Unscrew the casing of power supply (34). Remove the lids (35) and (36).Unscrew the transformer nut and pull out the screw from the back. Remove the connectors one by one and replace them directly onto the new transformer terminals.

NOTE: At the back of the transformer is a short pin, which locates into a hole in the casing of power supply (34). The cable outlets point to bottom right.

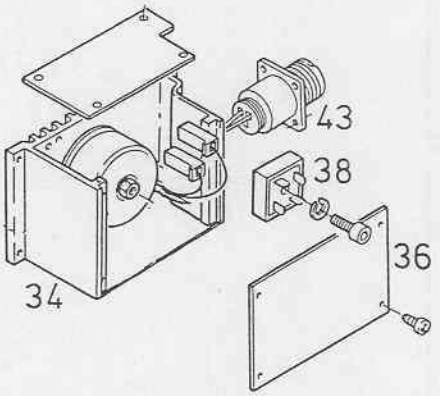
Re- install in reverse order.



8. RECTIFIER

Remove lid (36). Dismantle the receptacle (43) from the power supply casing (34) and pull out. Remove lid and unscrew the rectifier (38). Dismantle the connectors one by one and replace on new rectifier terminal directly.

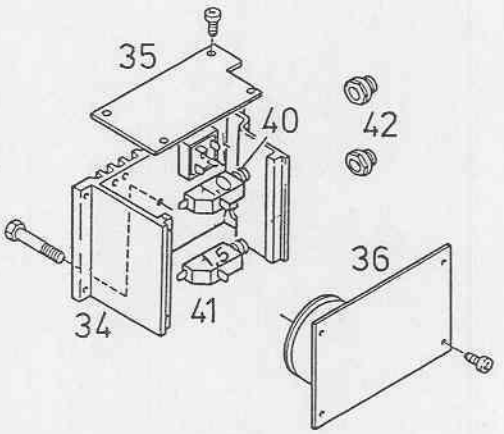
Re-install in reverse order.

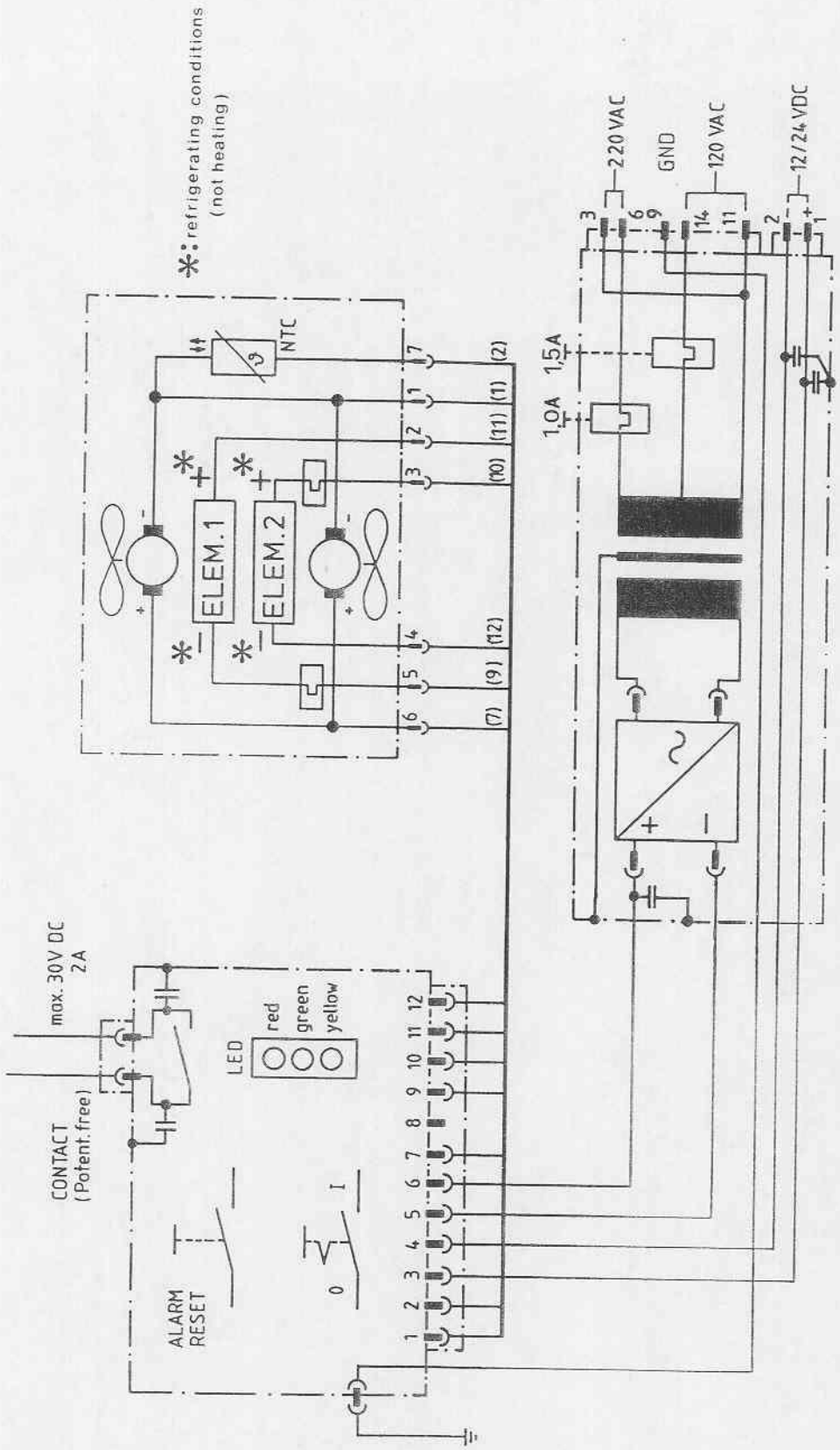


9. CIRCUIT BREAKERS

Remove side wall mains-adapter casing and lid mains-adapter casing (35 and 36). Dismantle transformer (see point 7). Remove fuse holder (42) and draw out fuse for fan protection (4o) or circuit breaker (41) 1.5 A from casing for power supply (34) Dismantle connectors one by one and replace onto new fuse terminals.

Re-install in reverse order.

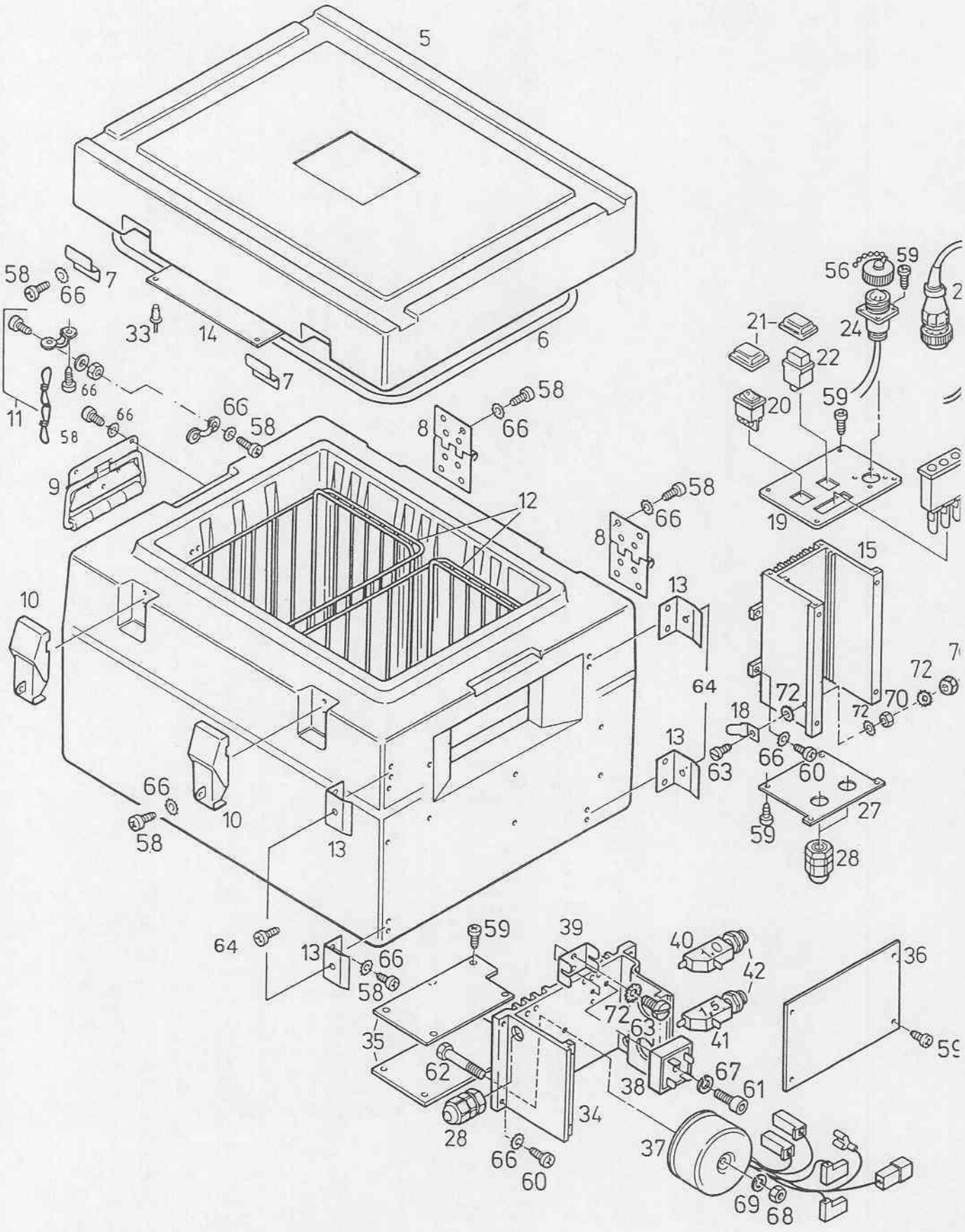



*: refrigerating conditions (not heating)
NTC
ELEM.1
ELEM.2
1,0A
1,5A
220 VAC
GND
120 VAC
12/24 VDC
max. 30 V DC 2A
CONTACT (Potent. free)
ALARM RESET
LED
red
green
yellow
0
I
1 2 3 4 5 6 7 8 9 10 11 12

SPARE PARTS LIST RCB 42 P

Pos.	Piece/ unit	Part No.	Description
1	1	292.99o3.oo.81o	Thermoelectric module
2	2	292.996o.oo.81o	Fan
3	1	292.9389.oo.67o	Covering grid
4	1	292.9497.oo.15o	Fan protection
5	1	292.85o2.13.181	Lid complete
6	1	292.851o.o3.51o	Lid gasket 2.ooo mm
7	2	292.85o5.o1.64o	Counter clasp for hinge
8	2	292.85o3.o1.64o	Hinge
9	2	292.85o4.o1.64o	Grip
1o	2	292.85o6.o1.64o	Catch
11	1	292.85o7.1o.64o	Chain complete
12	2	292.9427.11.64o	Basket
13	4	292.9814.o1.64o	Fixing angle
14	1	292.8589.oo.54o	Plastic foil
15	1	292.982o.o1.67o	Casing for electronics
16	1	292.9961.o1.81o	Electronic board
17	1	292.9891.oo.82o	Plug for electronics
18	2	292.2632.o3.83o	Grounding (single)
19	1	292.9821.o1.67o	Front plate of casing for electronics
2o	1	292.9865.oo.82o	ON/OFF switch
21	2	292.9866.oo.82o	Protecting cap
22	1	292.9864.oo.82o	Alarm Reset push button
23	1	292.9863.oo.84o	LED-indication
24	1	292.9875.o1.85o	Receptacle square flanged
25	1	292.9876.oo.85o	Plug for front plate electronics
26	1	292.9873.oo.85o	Plug for remote indication
27	1	292.9822.21.67o	Sidepart of electronic casing P
28	3	292.9842.oo.83o	Plastic cord screwing
29	1	292.9823.o1.67o	Lid electronic casing
3o	1	292.9868.o1.84o	Battery holder
31	1	292.9824.o1.67o	Lid for battery compartment
32	1	292.988o.o1.85o	Connection cable thermo-electrics-module
33	4	292.84o3.oo.19o	Rivet 5 x 1o PVC
34	1	292.983o.o1.67o	Casing for power supply
35	2	292.9831.o1.67o	Side wall mains-adapter casing
36	1	292.9832.o1.67o	Lid mains-adapter casing
37	1	292.999o.oo.81o	Transformer
38	1	292.9889.oo.84o	Rectifier
39	1	292.2632.o4.83o	Grounding strip quadruple
4o	1	292.9885.oo.84o	Circuit breaker 1,o A
41	1	292.9887.oo.84o	Circuit breaker 1,5 A
42	2	292.9888.oo.84o	Fuse holder
43	1	292.9877.51.85o	Receptacle Square flanged 12/24 V DC compl. with connection cable El.-mains adapter .
44	1	292.9878.5o.85o	Receptacle Square flanged 11o/12o V AC compl.with connection cable plug transformer
45	1	292.9872.oo.85o	Circular connector 12 - 24 V DC
46	1	292.9871.oo.85o	Circular connector 11o-12o V AC
47	1	292.987o.oo.85o	Circular connector 22o-24o V AC
48	4	722.7839.o2.36o	Rivet 4 x 8,6
49	1	292.9911.oo.64o	Cover
5o	2	292.9813.oo.64o	Cable retainer
51	1	292.994o.oo.15o	Aspirating mouth
52	4	734.1136.o5.35o	Spacer washer A 4,3 DIN 125 - MS
53	1	292.8o61.13.19o	Clip ø 9 (art.Nr. 33o6)
54	1	292.8o61.15.19o	Clip ø 15 (art.Nr. 333o)
55	4	292.9867.oo.84o	Accu

Pos.	Piece/ unit	Part.No.	Description
56	1	292.9883.oo.85o	Sealing cap (pos. 24) .....
57	2	292.9884.oo.85o	Sealing cap (pos. 43 and 44) .....
58	54	724.1287.45.32o	Lens head screw M4 x 8 DIN 7985 .....
59	42	729.5279.45.31o	Sheet metal screw B3,5 x 9,5 DIN 7981 ..
6o	8	724.1291.o5.32o	Lens head screw M4 x 12 DIN 7985 .....
61	1	724.1329.4o.32o	Lens head screw M5 x 16 DIN 7985 .....
62	1	725.2386.4o.32o	Cap screw M6 x 8o DIN 933 .....
63	3	723.1289.1o.32o	Cheese head screw M4 x 8 DIN 84 (Ms)....
64	4	292.2795.02.320	Lens head screw M5 x 10 DIN 7985 .....
65	5	731.2312.4o.34o	Hexagon nut M4 DIN 934 .....
66	58	735.1136.4o.35o	Spring washer 4 DIN 798o - A4.....
67	1	292.2795.11.35o	Spring washer 5 DIN 798o - A4 .....
68	1	731.4316.4o.34o	Hexagon nut M6 DIN 934 .....
69	1	735.1153.4o.35o	Spring washer B6 DIN 127 .....
7o	1	731.1312.13.34o	Hexagon nut M4 DIN 934 Ms.....
71	4	724.1292.4o.32o	Lens head screw M4 x 14 DIN 7985 .....
72	4	735.2136.15.35o	Spring washer A4,3 DIN 6798 Bz .....
--	1		Operating instructions .....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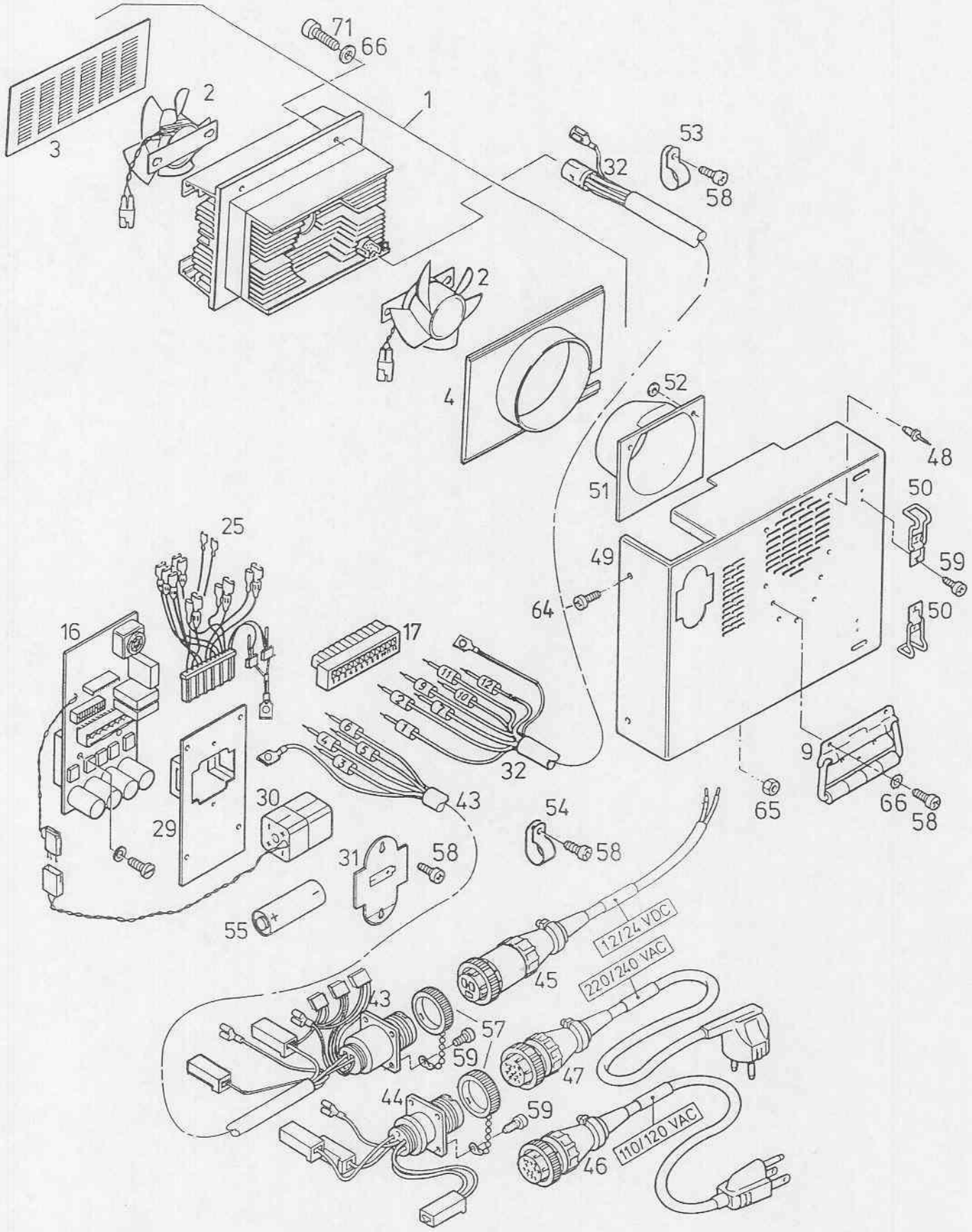
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12/24 VDC
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220/240 VAC
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110/120 VAC
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